

most fruitful and important research opportunities for twenty-first century ecology is the development of objective norms for the health of dynamic ecosystems.

Once formulated, such norms might tentatively govern our environmental behavior. Ecology will never be a science more exact than medicine. So we should always be prepared to change our notions of what is good for nature, just as we are prepared to change our notions of what is good for our bodies. But again, environmental *philosophy* should not concern itself with formulating and reformulating specific norms of environmental health and integrity. That is a job for ecologists. We philosophers should busy ourselves, rather, with connecting ecological "facts" (i.e., ecological hypotheses and theories) with values, and with trying to show, as I do in my book, that it is no less incumbent upon us to be solicitous of the health and integrity (however tentatively defined) of (changing, evolving) biotic communities than of the health and integrity of (changing, aging) human persons and of (changing, developing) human societies.



Biology and Ethics: Callicott Reconsidered

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Professor Callicott's reply to my analysis of his claims reminds me of my favorite philosophical exchange, a conversation penned by Lewis Carroll. "When I use a word," Humpty Dumpty said to Alice, "it means just what I choose it to mean—neither more nor less." But, as Alice reminded him, "The question is...whether you *can* make words mean so many different things."¹ This is precisely my question to Professor Callicott. Can you make words—like "evolution," "community," and "norm,"—mean so many different things, claiming one meaning in one argument, and an incompatible meaning in another?

In his "Reply," Professor Callicott states: "I nowhere suggest that ethics and evolution are analogous." Yet, as I quoted in my review, Callicott claims: The "conceptual and logical foundations of the land ethic" are a "Darwinian protosociobiological natural history of ethics, Darwinian ties of kinship among all forms of life on earth.... Its logic is that natural selection has endowed human beings with an affective moral response to perceived bonds of kinship and community membership and identity."² Value "in the philosophical sense," says Callicott, "is a newly discovered proper object of a specially evolved "public affection" or "moral sense" which all psychologically normal human beings have inherited from a long line of primates."³ It is logically inconsistent for Callicott to claim that evolution and natural selection provide the foundations of the land ethic, then, once someone points out the problematic logical consequences of this position, to deny espousing evolutionary ethics.



DISCUSSION

Similar difficulties plague Callicott's conception of community, as I noted in my review. In his "Reply," Callicott claims: "if the concept of a human community is coherent and robust enough to support anthropocentric moral obligations...then the concept of a biotic community—since no less coherent and robust—is coherent and robust enough to support ecocentric moral obligations." His claim does not work, however, because of the incompatible properties that Callicott attributes to biotic and human communities. In Callicott's book, he says that we humans "remain members of the human community," and that we have "moral responsibilities...to respect universal human rights."⁴ Yet, Callicott also claims: "Not only are other sentient creatures members of the biotic community and subordinate to its integrity, beauty, and stability; so are we."⁵ Either certain universal human rights have primacy, or the biotic community has primacy. For both to have primacy is impossible. Or, as Alice phrased it, to the Queen: "One *can't* believe impossible things."⁶

Finally, in his "Reply," Callicott denies my charge that his ethics is not normative by claiming that his ethics is normative in the sense in which a body temperature of 98.6 degrees "provides a *norm* against which we measure deviations—fever and hypothermia." That is, Callicott claims that his ethics (like a norm in medicine) is *statistically normative*. My review charged, however, that his ethics was not *ethically normative*, viz.:

one cannot be praised for acting in accord with natural selection. Either a certain ethical tendency is selected for, or it is not. This means that behavioral uniformities that are explained through natural selection are descriptive, not normative. Hence Callicott has admittedly saved his ethics from relativism, but at the price of its "oughtness" or normative character.

Callicott cannot answer the charge of his denying *ethical norms* by responding that his ethics has *statistical norms*. Statistical norms always tell us what behavior is most probable or frequent, in the sense of statistical frequency. Ethical norms do not.

Where does this exchange leave us? At the least, with some agreement. As Callicott correctly put it in his "Reply," "ecology does not provide us with objective dynamic norms of ecosystemic health." Further, our exchange suggests that, just as scientific

progress comes from a plurality of theories, so also progress in environmental ethics likely will come from a plurality of philosophical approaches—such as Callicott's work, rooted in a profound grasp of moral theory, and my own work, grounded in biology and philosophy of science. My recommendation for the future is that we take the advice of Ernst Mayr and analyze the key concepts of environmental ethics, concepts like "evolution," "community" and "norm," as Callicott and I have done. Mayr said that the "spectacular recent progress" in evolutionary theory was not due to improvements in measurement but due to improvements in the clarification of concepts.⁷ The same can be said for much of environmental ethics.

NOTES

¹ Lewis Carroll, *The Annotated Alice: Alice's Adventures in Wonderland and Through the Looking Glass* (New York: Bramhall House, 1960), p. 269; hereafter cited as Alice.

² J. Baird Callicott, *In Defense of the Land Ethic: Essays in Environmental Philosophy* (Albany: State University of New York Press, 1989), p. 83; hereafter cited as Callicott, LE.

³ Callicott, LE, p. 86.

⁴ Callicott, LE, p. 93.

⁵ Callicott, LE, p. 92.

⁶ Alice, p. 251.

⁷ Ernst Mayr, *Toward a New Philosophy of Biology* (Cambridge: Harvard University Press, 1988), p.vi.

